



**UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/289,776

07/08/97

RICEMAN

JEAN -MARC ZIMMERMAN  
226 ST. PAUL STREET  
WESTFIELD NJ 07090

LM41/0216

EXAMINER

RANAKRISHNAN, A. L.

ART UNIT

PAPER NUMBER

2743

DATE MAILED:

02/16/99

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office

NOTICE OF ALLOWANCE AND ISSUE FEE DUE

LI94170216

JEAN MARC ZIMMERMAN  
226 ST. PAUL STREET  
WESTFIELD NJ 07090

APPLICATION NO.	FILING DATE	TOTAL CLAIMS	EXAMINER AND GROUP ART UNIT	DATE MAILED
08/869,776	07/08/97	020	RAMAKRISHNIAH, R	2740 02/16/99
First Named Applicant	ZIMMERMAN, JEAN MARC			

TITLE OF INVENTION: APPARATUS AND METHOD FOR PARALLEL TRANSMISSION OF DATA OVER A TELEPHONE LINE

ATTY'S DOCKET NO.	CLASS-SUBCLASS	BATCH NO.	APPLN. TYPE	SMALL ENTITY	FEE DUE	DATE DUE
2	379-093.200	P07	UTILITY	YES	\$605.00	05/11/99

**THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED.**

**THE ISSUE FEE MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED.**

**HOW TO RESPOND TO THIS NOTICE:**

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

- A. If the status is changed, pay twice the amount of the FEE DUE shown above and notify the Patent and Trademark Office of the change in status, or
- B. If the status is the same, pay the FEE DUE shown above.

If the SMALL ENTITY is shown as NO:

- A. Pay FEE DUE shown above, or
- B. File verified statement of Small Entity Status before, or with, payment of 1/2 the FEE DUE shown above.

Part B-Issue Fee Transmittal should be completed and returned to the Patent and Trademark Office (PTO) with your ISSUE FEE. Even if the ISSUE FEE has already been paid by charge to deposit account, Part B Issue Fee Transmittal should be completed and returned. If you are charging the ISSUE FEE to your deposit account, section "4b" of Part B-Issue Fee Transmittal should be completed and an extra copy of the form should be submitted.

III. All communications regarding this application must give application number and batch number.

Please direct all communications prior to issuance to Box ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.**

PATENT AND TRADEMARK OFFICE COPY

# Notice of Allowability

Application No.

08/889,776

Applicant(s)

William K. Riceman et al.

Examiner

Melur Ramakrishnaiah

Group Art Unit

2743



All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance and Issue Fee Due or other appropriate communication will be mailed in due course.

☒ This communication is responsive to 11-28-98

☒ The allowed claim(s) is/are 2, 4-5, 8-19, 21-24, 20, now renumbered 1-20

☐ The drawings filed on \_\_\_\_\_ are acceptable.

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

A SHORTENED STATUTORY PERIOD FOR RESPONSE to comply with the requirements noted below is set to EXPIRE **THREE MONTHS** FROM THE "DATE MAILED" of this Office action. Failure to timely comply will result in ABANDONMENT of this application. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

☐ Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL APPLICATION, PTO-152, which discloses that the oath or declaration is deficient. A SUBSTITUTE OATH OR DECLARATION IS REQUIRED.

☒ Applicant MUST submit NEW FORMAL DRAWINGS

☒ because the originally filed drawings were declared by applicant to be informal.

☐ including changes required by the Notice of Draftsperson's Patent Drawing Review, PTO-948, attached hereto or to Paper No. \_\_\_\_\_

☐ including changes required by the proposed drawing correction filed on \_\_\_\_\_, which has been approved by the examiner.

☐ including changes required by the attached Examiner's Amendment/Comment.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the reverse side of the drawings. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

☐ Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Any response to this letter should include, in the upper right hand corner, the APPLICATION NUMBER (SERIES CODE/SERIAL NUMBER). If applicant has received a Notice of Allowance and Issue Fee Due, the ISSUE BATCH NUMBER and DATE of the NOTICE OF ALLOWANCE should also be included.

## Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

☐ Interview Summary, PTO-413

☐ Examiner's Amendment/Comment

☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

☒ Examiner's Statement of Reasons for Allowance

  
CURTIS A. KUNTZ  
SUPERVISORY PATENT EXAMINER  
GROUP 2700

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***Drawings***

1. The application having been allowed, formal drawings are required in response to this Office action.
2. Formal drawings are now required and must be filed within the THREE MONTH shortened statutory period set for reply in the "NOTICE OF ALLOWABILITY" (PTOL-37 or PTO-37). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a). Failure to timely submit the drawings will result in **ABANDONMENT** of the application. The drawings should be submitted as a separate paper with a transmittal letter which is addressed to the Official Draftsperson. The art unit number, application number and number of drawing sheets should be written on the reverse side of the drawings.

***Allowable Subject Matter***

3. The following is an examiner's statement of reasons for allowance: The prior art does not teach method for high speed transmission of data recited in the independent claims 2 and 20. The independent claim 2 recites a method for simultaneously transmitting multiple data files at multiple frequencies over a communications line at high speed comprising the steps of: compressing the data to be transmitted; splitting said data into multiple files; generating and adding an error check signal to the multiple data files as a first additional file; generating and adding a clocking signal to the multiple data files as a second additional file; sending each one of the multiple data, the first additional and the second additional files to a separate tone generator; generating a different tone

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for each one of the multiple data, the first additional and the second additional files, wherein the frequency of each one of the tones are separated from one another by a specified frequency bandwidth; combining the multiple tones into one multi-tone signal; and transmitting the multi-tone signal over a communication line. The independent claim 20 recites a method for transmitting and receiving multiple data files simultaneously at multiple frequencies over a communications line at high speed, comprising the steps of: storing data to be transmitted in a first computer memory; compressing the stored data; splitting the data into multiple files, wherein the multiple data files are created from the bytes of data to be transmitted, each one of the bytes being comprised of eight bits of data, each one of the bits corresponding to a particular position within each one of the bytes, and each one of the data files being comprised of bits from each one of the bytes corresponding to the same particular position; generating and adding an error check signal to the multiple data files as a first additional file; generating and adding a clocking signal file to the multiple data files as a second additional file; generating and adding a timed start/stop and sequence command to at least one of the multiple data files, the first additional file and the second additional file; sending each one of the multiple data files, the first additional file and the second additional file to at least one tone generator; generating a different tone for each one of the multiple data files, the first additional file and the second additional file, wherein the frequency of each one of the tones generated are separated from one another by predetermined frequency bandwidths; combining the multiple tones into one multi-tone signal; transmitting multi tone signal over a communication line, wherein each one of the files comprising the multi-tone signal is

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comprised of a plurality of bits data, each one of the bits corresponding to a particular position in the data file, and each bit corresponding to the same particular position in each one of the files being transmitted simultaneously; receiving the multi tone signal; filtering the signal; reassembling the received signal; and storing the reassembled signal in a second computer memory

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

4. Claims 2, 4-5, 8-19, 20-24, are allowed.

Claims 2, 4-5, 8-19, 21-24, 20 are now renumbered 1-20.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melur Ramakrishnaiah whose telephone number is (703) 305-1461. The examiner can normally be reached on Monday to Friday from 7 AM to 4 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz, can be reached on (703) 305-4708. The fax phone number for this Group is (703) 305-9508.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

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**6. Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

(703) 308-9051, (for formal communications intended for entry)

**Or:**

(703) 305-9508 (for informal or draft communications, please label  
"PROPOSED" or "DRAFT")

*Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).*

  
CURTIS A. KUNTZ  
SUPERVISORY PATENT EXAMINER  
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